CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2009-

FOR
SETTON PROPERTIES, INC.
PISTACHIO PROCESSING PLANT NO. 2
TULARE COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless and until the Regional Water Board adopts or the Executive Officer issues a revised MRP. Changes to sample location shall be established with concurrence of Regional Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 (Standard Provisions). The results of analyses performed in accordance with specified test procedures, taken more frequently than required at the locations specified in this MRP, shall be reported to the Regional Water Board and used in determining compliance.

Field test instruments (such as pH) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are calibrated prior to each use;
3. Instruments are serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions; and
4. Field calibration reports are submitted as described in the “Reporting” section of this MRP.

In addition to details specified in Standard Provision, Provisions for Monitoring C.3, records of monitoring information shall also include the following:

1. Method detection limit (MDL);
2. Reporting limit (RL) (i.e., a practical quantitation limit or PQL); and
3. Documentation of cation/anion balance for general minerals analysis of supply water, and groundwater samples.

If the regulatory limitation for a given constituent is less than the RL, then any laboratory analytical results for that constituent that are below the RL but above the MDL shall be reported and flagged as estimated.

Analytical procedures shall comply with the methods and holding times specified in: Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020, 1983); Methods for Determination of Inorganic Substances in Environmental Samples (EPA/600/R-93/100, 1993); Standard Methods for the Examination of Water and Wastewater, 20th Edition (WEF, APHA, AWWA); and Soil, Plant and Water Reference Methods for the Western Region, 2003, 2nd Edition (hereafter Western Region Methods).

If monitoring consistently shows no significant variation in magnitude of a constituent concentration after at least 12 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

EFFLUENT MONITORING

Effluent samples shall be collected just prior to discharge to the Reclamation Area. The Discharger shall monitor the discharge for the constituents and frequencies specified below throughout the processing season and while there is a discharge:

Constituent/Parameter	Units	Type	Frequency
Daily Flow[1]	gal/day	Estimated	Daily
pH	pH units	Grab	Daily
Electrical Conductivity	µmhos/cm	Grab	Daily
Total Suspended Solids (TSS)	mg/L	24 hr – Composite[2]	Weekly
BOD_5[3]	mg/L	24 hr – Composite	Weekly
Nitrate(as NO_3-N)	mg/L	24 hr – Composite	Weekly
Total Kjeldahl Nitrogen (TKN)	mg/L	24 hr – Composite	Weekly
Total Nitrogen	mg/L	24 hr – Composite	Weekly
TDS[4]	mg/L	24 hr – Composite	Weekly
InorganicTDS[5]	mg/L	24 hr – Composite	Weekly
Potassium	mg/L	24 hr – Composite	Weekly
General Minerals[6]	mg/L	24 hr – Composite	Annually[7]
Boron	mg/L	24 hr – Composite	Annually[7]

1 Flow shall be estimated from the influent flow to the plant as measured using a magnetic or ultrasonic flow meter.

2 Unless otherwise approved, 24-hour composite samples shall be collected using a composite wastewater sampler. While being composited, samples shall be refrigerated at 4 ºC (39.2 ºF).

3 Five-day, 20°C biochemical oxygen demand (BOD_5).

4 TDS shall be determined using Standard Method 2540C.

5 Inorganic TDS shall be determined using EPA Method No. 160.4.

6 General Minerals, as used in this MRP, shall include the constituents in the General Minerals Analyte List below.

7 During the middle of the processing season.

General Minerals Analyte List [1]

Alkalinity (as $CaCO_3$)	Chloride	Sodium
Bicarbonate (as $CaCO_3$)	Hardness (as $CaCO_3$)	Sulfate
Calcium	Magnesium	TDS
Carbonate (as $CaCO_3$)	Potassium	

[1] General Minerals Analyte lists may vary depending on the laboratory, but shall include at least the above analytes.

RECLAMATION AREA MONITORING

The Discharger shall monitor the Reclamation Area on a daily basis throughout the processing season and while there is a discharge. Monitoring shall describe the type of crops grown and shall include notations based on observations whether nuisance conditions such as ponding, insects, and/or objectionable odors are present. The monitoring data shall be submitted as part of the annual monitoring report.

In addition, the Discharger shall perform the following routine monitoring and loading calculations for each discrete irrigation area.

Constituent/Parameter	Units	Type	Frequency
Wastewater application area	acres	N/A	Daily[1]
Wastewater flow	mgd	Estimated[2]	Daily[1]
Hydraulic loading	inches/acre[3]	Calculated	Annually[1]
BOD_5 loading[4]			
on day of application[5]	lbs/acre	Calculated	Daily[1]
averaged over application cycle[6]	lbs/acre/day	Calculated	Daily[1]
Annual nitrogen loading[7]			
from wastewater	lbs/acre	Calculated	Annually[1]
from fertilizers	lbs/acre	Calculated	Annually[1]
Inorganic TDS loading[7]	lbs/acre	Calculated	Annually[1]
Potassium loading[7]	lbs/acre	Calculated	Annually[1]

[1] When discharging.
[2] Flow estimate based on influent flow to the Plant.
[3] Report to the nearest 0.5 inch.
[4] BOD_5 loading rates shall be calculated using the applied volume of wastewater, actual application area, and the average wastewater BOD_5.
[5] Application day, as referred to in this MRP, shall be defined as a 24-hour period.
[6] Application cycle, as referred to in this MRP, shall be defined as the period (in days) of wastewater application followed by resting interval until next wastewater application.
[7] Wastewater nitrogen, inorganic TDS, and potassium loading shall be calculated using the applied volume of wastewater, actual application area, and the average concentration of total nitrogen, inorganic TDS, and potassium for the season.

SOIL MONITORING

The Discharger shall establish with concurrence of Regional Water Board staff, at least four soil profile monitoring locations within the Reclamation Area and at least one permanent representative background location(s) (i.e., that historically have not received process wastewater). The samples shall be collected and analyzed for the constituents and frequencies specified below:

Constituent/Parameter	Units	Type of Sample	Frequency
Cation Exchange Capacity	meq/100 grams	6 feet[1]	Semi-annually[2]
Soil EC	dS/m	6 feet[1]	Semi-annually[2]
Soil pH	pH units	6 feet[1]	Semi-annually[2]
Buffer pH	mg/kg as $CaCO_3$	6 feet[1]	Semi-annually[2]
Total Kjeldahl Nitrogen	mg/kg	6 feet[1]	Semi-annually[2]
Nitrate (as NO_3-N)	mg/kg	6 feet[1]	Semi-annually[2]
Potassium	mg/kg	6 feet[1]	Semi-annually[2]

[1] Samples to be analyzed shall be collected at 2, and 6 feet.

[2] In June and November.

GROUNDWATER MONITORING

The Discharger shall use existing irrigation and water supply wells to set up an appropriate groundwater monitoring network, with concurrence of Regional Water Board staff to monitor groundwater up-gradient and down-gradient of the Reclamation Area.

Prior to collecting samples each well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. The Discharger shall monitor groundwater for the constituents and frequencies specified below.

Constituent/Parameter	Units	Type of Sample	Frequency
pH	pH units	Grab	Annually[1]
Electrical Conductivity	µmhos/cm	Grab	Annually[1]
Nitrate (as NO_3-N)	mg/L	Grab	Annually[1]
Boron	mg/L	Grab	Annually[1]
Iron	mg/L	Grab	Annually[1,2]
Manganese	mg/L	Grab	Annually[1,2]

Constituent/Parameter	Units	Type of Sample	Frequency
Total Organic Carbon	mg/L	Grab	Annually[1]
General Minerals[3]	mg/L	Grab	Annually[1]

1 In November.

2 Samples must be filtered prior to preservation.

3 General Minerals shall include at least the constituents listed in the General Minerals Analyte List included herein in the Effluent Monitoring section. An anion/cation balance demonstrating that analyses are complete shall accompany the results.

SOURCE WATER MONITORING

The Discharger's facility supply water shall be monitored for the following:

Constituent/Parameter	Units	Measurement	Frequency
Electrical Conductivity	µmhos/cm	Grab	Annually[1]

1 During the processing season.

REPORTING

The Discharger shall report monitoring data and information as required in this MRP and as required in the Standard Provisions.

All reports submitted in response to this Order shall comply with the signatory requirements in Standard Provision B.3.

An Annual Report shall be submitted to the Regional Water Board **by 1 February of the year following the year the samples were collected.** In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included. The Annual Report shall include the following:

1. The names and telephone numbers of persons to contact regarding emergency and routine situations;
2. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4);
3. The most recent water supply report including laboratory data;

4. A summary of solids monitoring, including:
   a. Annual solids production in dry tons and percent solids; and
   b. A description of disposal methods. If more than one method is used, include the percentage disposed of by each method.
5. A summary and discussion of the compliance record for the reporting period. If violations have occurred, the report shall also discuss corrective actions taken and planned to bring the discharge into full compliance with this Order.

All technical reports required herein must be overseen and certified by a California registered civil engineer, certified engineering geologist, or certified hydrogeologist in accordance with California Business and Professions Code, sections 6735, 7835, and 7835.1.

Monitoring data and/or discussions submitted concerning the wastewater treatment and disposal system performance must also be signed and certified by the Facility manager. When reports contain laboratory analyses performed by the Discharger and the Facility manager is not in the direct line of supervision of the laboratory, reports must also be signed and certified by the chief of the laboratory.

A transmittal letter shall accompany each self-monitoring report. The letter shall discuss any violations during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by:_____

Pamela C. Creedon, Executive Officer

_____
(DATE)

kc/dkp: 3/25/09